



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,142	11/28/2005	William J. Murphy	JJK-0202 (P1998J0118A)	6506
27810	7590	11/15/2006	EXAMINER	
EXXONMOBIL RESEARCH AND ENGINEERING COMPANY P.O. BOX 900 1545 ROUTE 22 EAST ANNANDALE, NJ 08801-0900			MCAVOY, ELLEN M	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

c

<b>Office Action Summary</b>	<b>Application No.</b> 10/532,142	<b>Applicant(s)</b> MURPHY ET AL.	
	<b>Examiner</b> Ellen M. McAvoy	<b>Art Unit</b> 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al (6,620,312).

Applicants' arguments filed 23 August 2006 have been fully considered but they are not persuasive. As previously set forth, method claim 11 differs from Murphy et al ["Murphy"] by using a unitized mixed powdered pellet catalyst comprising both the (i) first component and (ii) the second component being selected from 8, 10 and 12 ring molecular sieves, and mixtures thereof, having a metal hydrogenation component dispersed thereon. However, Murphy teaches as the dewaxing catalyst a 10 member ring unidirectional inorganic oxide molecular sieve impregnated with from 0.1 to 3 wt.% of at least one Group VIII metal, preferably platinum or palladium. Suitable 10 member ring unidirectional inorganic oxide molecular sieves include zeolites ZSM-22, ZSM-23, ZSM-35 and ZSM-48. Murphy teaches that the unitized powdered catalysts comprise a mixture of individual, different and distinct catalyst components. See column 4, lines 56-65. Thus the examiner maintains the position that Murphy meets the limitations of both components (i) and (ii) set forth in method claim 11. The claim differs by including step (iii) which sets forth a ratio of the first and second components. Although not taught in Murphy, the examiner maintains the position that any ratio of components (i) and (ii)

may be used in the process of the prior art since the method of hydroisomerating a waxy feed to produce a lube basestock is the same.

Applicants argue that Murphy does not describe or suggest contacting a waxy feed with a unitized catalyst having the components (i) and (ii) of the claimed invention. Applicants argue that Murphy does not provide any teaching or suggestion that the second, amorphous hydroisomerization or refractory metal oxide component can be omitted from a catalyst, and that even the definition of “unitized” in Murphy requires the presence of both types of catalyst. This is not deemed to be persuasive because applicants’ open-ended claim language “comprising” does not exclude the addition of the second amorphous hydroisomerization or refractory metal oxide catalyst component of the prior art. The examiner is of the position that there is no requirement in the claim that component (i) and component (ii) be different. They are both “selected from 8, 10 and 12 ring molecular sieves, and mixtures thereof, having a metal hydrogenation component dispersed thereon”. Thus, it is not clear that (i) and (ii) are two different components. And, as set forth above, Murphy teaches that the unitized powdered catalysts comprise a mixture of individual, different and distinct catalyst components. Thus, the examiner is of the position that it is not clear that the method set forth in independent claim 11 differs from the methods disclosed in Murphy.

***Claim Rejections - 35 USC § 103***

Claims 1-17 are still rejected under 35 U.S.C. 103(a) as being unpatentable over Brandes et al (5,723,716), Brandes et al (5,770,542) and Brandes et al (5,977,425).

Applicants' arguments filed 23 August 2006 have been fully considered but they are not persuasive. As previously set forth, the Brandes et al references ["Brandes"] disclose methods of upgrading waxy feeds using a catalyst comprising mixed powdered dewaxing catalyst and powdered isomerization catalyst formed into discrete particles. The dewaxing catalyst is a 10 member ring unidirectional inorganic oxide molecular sieve impregnated with from 0.1 to 5 wt.% of at least one Group VIII metal, preferably platinum or palladium. Suitable 10 member ring unidirectional zeolites include ZSM-22, ZSM-23, ZSM-35 and ZSM-48. The isomerization catalyst component comprises a refractory metal oxide support base such as alumina, silica-alumina, zirconia, etc., which contains an additional catalytic component including Group VIII metals, preferably platinum and palladium, present in an amount of 0.1 to 5 wt. %, and optionally including a promoter or dopant such as yttria or magnesia. This meets the limitations of (i) the first dewaxing component, and (ii) the second isomerization component of the claims. Brandes teaches that the unitized pellet catalyst can contain the individual powdered components which make it up in a broad ratio, i.e., the components can be present in the ratio in the range of 1:100 or more to 100 or more :1, preferably 1:3 to 3:1. Independent method claims 1 and 10 differ by including step (iii) which sets forth a ratio of the first and second components by a specific criteria. Although not taught in the Brandes patents, the examiner maintains the position

that any ratio of components (i) and (ii) may be used in the process of the prior art since the method of hydrosomerating a waxy feed to produce a lube basestock is the same.

Applicants argue that the Brandes references do not describe or suggest contacting a waxy feed with a unitized catalyst having a ratio of components according to element (iii) of claims 1 or 10. Element (iii) recites that “wherein the first and second components are present in a ratio such that when evaluated in the conversion of methyl cyclohexane at 320°C to 1,1-dimethylcyclopentane, 1,2-dimethylcyclopentane, 1,3-dimethylcyclopentane and ethylcyclopentane, the catalyst will provide a trans-1,2-/trans-1,3-dimethylcyclopentane ratio in the range of less than about 1 and a selectivity to ethylcyclopentane, at 10% conversion, of at least about 50%.” The examiner is of the position that element (iii) does not state what the ratio is of the first and the second components in numerical terms such as, for example, 1:10 or 25:1 for direct comparison with the invention set forth in the Brandes references wherein a broad ratio of the same two components is taught as set forth above. The examiner is of the position that since the Patent Office is not equipped to analyze the possible ratios defined by the criteria in element (iii), it is not clear that the claimed methods differ from the methods disclosed in the prior art. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith. *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

As previously set forth, method claim 11 differs by using a unitized mixed powdered pellet catalyst comprising both the (i) first component and (ii) the second component being selected from 8, 10 and 12 ring molecular sieves, and mixtures thereof, having a metal

hydrogenation component dispersed thereon. However, as set forth above, the Brandes patents teach as the dewaxing catalyst a 10 member ring unidirectional inorganic oxide molecular sieve impregnated with from 0.1 to 3 wt.% of at least one Group VIII metal, preferably platinum or palladium. Suitable 10 member ring unidirectional inorganic oxide molecular sieves include zeolites ZSM-22, ZSM-23, ZSM-35 and ZSM-48. Brandes teaches that the unitized powdered catalysts comprise a mixture of individual, different and distinct catalyst components. Thus the examiner is of the position that the Brandes patents meet the limitations of both components (i) and (ii) set forth in method claim 11. The claim differs by including step (iii) which sets forth a ratio of the first and second components. Although not taught in the Brandes patents, the examiner is of the position that any ratio of components (i) and (ii) may be used in the process of the prior art since the method of hydroisomerating a waxy feed to produce a lube basestock is the same.

Applicants argue that the Brandes references do not provide any teaching or suggestion that the second, amorphous hydroisomerization or refractory metal oxide catalyst can be omitted, and that even the definition of "unitized" in the Brandes references requires the presence of both types of catalysts. This is not deemed to be persuasive because applicants' open-ended claim language "comprising" does not exclude the addition of the second amorphous hydroisomerization or refractory metal oxide catalyst component of the prior art. Applicants argue that all of the unitized catalysts taught by the Brandes references require the presence of both a 10 member ring unidirectional pore inorganic oxide molecular sieve type component and an amorphous type component. By contrast, applicants argue, the claimed invention requires a

unitized catalyst composed of two molecular sieve components. This is not deemed to be persuasive because there is no requirement in the claim that component (i) and component (ii) be different. They are both “selected from 8, 10 and 12 ring molecular sieves, and mixtures thereof, having a metal hydrogenation component dispersed thereon”. It is not clear that (i) and (ii) are two different components. As set forth above, the Brandes references teach that the unitized powdered catalysts comprise a mixture of individual, different and distinct catalyst components. It is not clear that the method set forth in independent claim 11 differs from the methods disclosed in the Brandes references.

The provisional rejection of claims 11-17 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application No. 10/532,143 made in the previous office action is withdrawn in view of applicants’ submission of a terminal disclaimer.

The rejection of claims 1-10 under 35 U.S.C. 103(a) as being unpatentable over Murphy et al (6,620,312) made in the previous office action is withdrawn in view of applicants’ argument that claims 1-10 correspond to subject matter described in 60/074,579, and thus has a priority date of 13 February 1998.

**THIS ACTION IS MADE FINAL.** Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO



MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

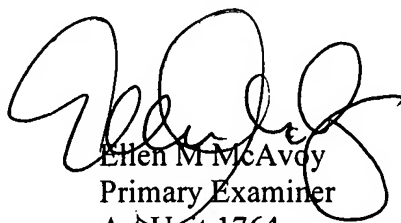
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

Art Unit: 1764

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ellen M. McAvoy  
Primary Examiner  
Art Unit 1764

EMcAvoy  
November 13, 2006